



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Jerry Z. Shan et al.

Serial No.: 10/698,736

Filed: 10/31/2003

For: A METHOD FOR DETECTING A  
CHANGE IN A SYSTEM

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Group Art Unit: 2863

Examiner: Kundu, Sujoy

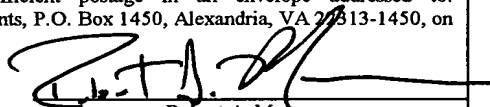
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December 21, 2005  
Date

  
Robert A. Manware

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Dear Sir:

In accordance with the OG Notice of July 12, 2005, Applicants respectfully submit this Pre-Appeal Brief Request for Review. This Request is being filed concurrently with a Notice of Appeal.

In the Final Office Action, the Examiner rejected claims 1, 2, 4, 9, 10, 12, 15-18, 21-23, 25-27 and 30 under U.S.C. § 102(b) as being anticipated by Morita (U.S. Patent No. 5,453,749). The Examiner rejected claims 3, 5, 13, 19 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Morita, in view of Cox (U.S. Pat. No. 5,734,592). The Examiner rejected claims 6-8, 28 and 29 under 35 U.S.C. § 103(a) as being unpatentable over Morita, and Cox, as applied to claim 3, an further in view of Ikeguchi et al. (US 2005/0075832 A1). Applicants respectfully submit that these rejections are improper.

Applicants respectfully submit that the Morita reference does not disclose each of the elements recited in the present claims. Applicants further submit that neither the Cox reference, nor the Ikeguchi reference cures the deficiencies of the Morita reference, as discussed below. Thus, none of the references, considered alone or together, discloses each of the elements recited in independent claims 1, 15, 22, 25 or 27, and thus, none of the references, considered alone or together, anticipates or renders obvious the recited subject matter.

Specifically, the Morita reference does not disclose, “generating a plurality of sequences from a first portion of the data stream,” as recited in claim 1, “training a detector using a plurality of sequences generated from a first portion of a data stream,” as set forth in claim 15, “a trainer configured to generate a plurality of sequences from a first portion of a data stream,” as set forth in claim 22, a computer-readable medium storing computer instructions for “generating a plurality of sequences from a first portion of a data stream,” as set forth in claim 25, or “means for generating a plurality of sequences from a first portion of a data stream,” as set forth in claim 27.

Generally, the present application is directed to a data monitoring system that may be employed to monitor various types of measured data. Paragraph 20, lines 1-6. The data monitoring system 10 may monitor a data stream 12 from any one of a number of data producing systems such as computer-related systems, disk drives, web servers, call centers, traffic systems, car engines, patients, stock market, or citation indices, for example. Paragraph 20, lines 6-13. The data stream 12 may generally include a sequence of temporally ordered data values. Paragraph 21, lines 2-3. In accordance with embodiments of the present invention, the data stream 12 is partitioned into a training window 16 and a testing window 18. Paragraph 28, lines 1-2. The training window 16 is defined as a contiguous portion of the data stream 12 that is used to train a detector 22 configured to detect something notable or interesting about the data stream 12, such as a change. Paragraph 29, lines 1-3. The trainer 20 uses the data in the training window 16 to generate a number of sequences 24 and uses the sequences 24 to determine an optimal value for sensitivity parameter 26 to be used to parameterize the detector 22. Paragraph 29, lines 4-7. The sensitivity parameter 26 might be a threshold, for instance, establishing a level that is used to trigger an alarm 28 if the monitored data reaches the value of the sensitivity parameter 26.

Paragraph 29, lines 7-9. The value established for the sensitivity parameter 26 is then delivered to the detector 22 such that the detector 22 can use the sensitivity parameter 26 to determine whether the data in the testing window 18 exhibits the type of behavior that the detector 22 should detect. Paragraph 30, lines 1-3. By establishing a value for the sensitivity parameter 26 and setting the detector 22 to detect changes correlative to the sensitivity parameter 26, the detector is “trained.” Paragraph 30, lines 3-6.

Once trained by determining a value for a sensitivity parameter 26 by using the sequences 24 generated from the data training window 16, the detector 22 monitors the data contained within the testing window 18 to determine whether the data in the testing window 18 contains the sort of event or exemplify the sort of property the detector 22 is designed to detect. Paragraph 33, lines 1-8. As can be appreciated, the detector 22 is configured to detect “something” in the data stream 12. Paragraph 34, lines 1-2. That is to say, the detector 22 is configured to monitor the data stream 12 to detect something of interest, such as the occurrence or non-occurrence of a notable event or the implication that the data producing system 14 is in a state of interest. Paragraph 34, lines 2-4. Most commonly, the detector 22 will be configured to detect that a salient change has occurred in the data stream 12 – either that a salient change occurred within the testing window 18 or that the data contained in the testing window 18 is saliently different from the data contained in the training window 16. Paragraph 34, lines 4-8.

In summary, embodiments of the present system are directed to a system configured to receive a data stream. The system includes a trainer which samples a first portion of the data stream (e.g. in a “training window”) to train the system to detect events, such as changes, in a second portion of the data stream (e.g. in a “testing window”). That is, the present system uses a first portion of the data stream to train itself to detect something in a second portion of the data stream.

In contrast to the present Application, the Morita reference discloses a sensitivity measuring apparatus for measuring the sensitivity of a fire detector in a fire alarm system. Col. 1, lines 8-10. As disclosed in the Morita reference, a sensitivity measuring apparatus 10 receives an output signal of an ionization type smoke detector SEi and outputs a sensitivity value corresponding to this output signal. Col. 4, lines 61-66. The sensitivity measuring

apparatus 10 includes a ROM 22 which stores a reference table indicating the correspondence between the output signal value received from the fire detector SEi and the sensitivity value corresponding to that particular type of fire detector SEi. Col. 5, lines 17-20. The sensitivity measuring apparatus 10 further includes a number of RAMs 31-36, configured to store various measured values and calibration values, and further includes a number of LEDs, L1-L6 configured to indicate certain information related to the type and sensitivity of the fire detector SEi. Col. 5, lines 21-29; Col. 5, lines 43-57.

By comparison and generally speaking, the Morita reference does not fairly teach or suggest a self-training system that uses a first portion of a data stream to train itself to detect something in a second portion of the data stream. The overall differences in the Morita system and Applicants system becomes apparent when closely examining the recited elements and the relationship therebetween, and attempting to carry the Examiner's assertions through each and every element of each of the claims. By considering the recited subject matter in light of the specification and comparing it to the objectives and teachings of Morita, the differences become more apparent.

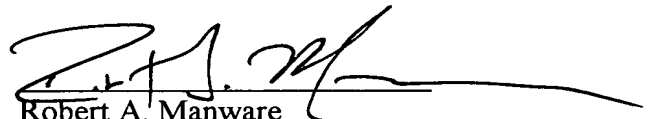
For instance, in the rejection, the Examiner correlated the output signal from the smoke detector SEi with the "data stream" recited in claim 1. In citing a feature of the Morita reference as corresponding to "*generating a plurality of sequences from a first portion of the data stream,*" the Examiner cited Fig. 3 and Col. 5, lines 19-29, 43-54. Office Action, Page 2. The Examiner further stated, "[t]he feature ROM 21 store a program, which stores a reference table which corresponds to the output signal. Hence providing a sequence." Office Action, Page 8. However, contrary to the Examiner's assertion, nothing stored in the ROM 21 is *generated from the data stream*. As explicitly described in Morita, "ROM 21 stores a program whose flowchart is shown in FIG. 3. ROM 22 stores a reference table which indicates the correspondence between the output signal value of the fire detector SEi and the sensitivity value of the fire detector SEi." Col. 5, lines 18-21. The information stored in the ROM 21 and 22 is clearly pre-determined and stored prior to receiving the data stream. Thus, the information stored in the Read Only Memory (ROM 21 and ROM 22) is *not* generated from the output signal of the smoke detector SEi. The very nature of Read Only Memory would clearly suggest that whatever is stored in the ROM 21 and ROM 22 is stored before the data stream (output signal) is received. Thus, it is clear that nothing that

may be generated from the output signal of Morita is stored in the ROM 21 and ROM 22. As such, the information stored in ROM 21 and ROM 22 cannot be fairly correlated with a plurality of sequences that are generated from the received data stream, as set forth in claim 1.

Thus, the Examiner's assertion of the information stored in the ROM 21 and ROM 22 as teaching "generating a plurality of sequences from a first portion of the data stream," is clearly erroneous and unsupportable. For at least this reason, Applicants respectfully assert that the Morita reference does not disclose the subject matter set forth in independent claims 1, 15, 22, 25 and 27. Applicants respectfully submit that neither the Cox reference, nor the Ikeguchi reference cures the deficiencies of the Morita reference discussed above. Accordingly, Applicants respectfully requests allowance of independent claims 1, 15, 22, 25 and 27 and the claims that depend therefrom.

Respectfully submitted,

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